

Title (en)  
EXPANDABLE MATERIAL WITH IMPROVED THERMAL INSULATION PROPERTIES AND USE THEREOF

Title (de)  
EXPANDIERBARES MATERIAL MIT VERBESSERTEN WÄRMEDÄMMEIGENSCHAFTEN UND VERWENDUNG DAVON

Title (fr)  
MATÉRIAU EXPANSIBLE AYANT DES PROPRIÉTÉS D'ISOLATION THERMIQUE AMÉLIORÉES ET SON UTILISATION

Publication  
**EP 4244282 A1 20230920 (EN)**

Application  
**EP 21801951 A 20211108**

Priority  
• EP 20207045 A 20201111  
• EP 2021080885 W 20211108

Abstract (en)  
[origin: EP4001352A1] The invention is directed to a thermally expandable composition comprising at least one polymer P, at least one chemical blowing agent CBA, at least one physical blowing agent PBA composed of expandable microspheres, and at least one filler F. The invention is also related to a damping element comprising a first layer (2) composed of an expansion material and a second layer (3) composed of an acoustic damping material. The damping element is suitable for providing vibration and/or noise damped systems.

IPC 8 full level  
**C08J 9/06** (2006.01); **C08J 9/00** (2006.01); **C08J 9/10** (2006.01); **C08J 9/32** (2006.01); **C08L 95/00** (2006.01)

CPC (source: EP KR US)  
**A47L 15/4209** (2016.11 - US); **B32B 5/18** (2013.01 - US); **B32B 5/20** (2013.01 - US); **B32B 27/065** (2013.01 - US); **B32B 27/20** (2013.01 - US); **B32B 27/22** (2013.01 - US); **B60R 13/0815** (2013.01 - US); **C08J 9/0061** (2013.01 - KR US); **C08J 9/0066** (2013.01 - KR US); **C08J 9/0085** (2013.01 - KR); **C08J 9/0095** (2013.01 - KR); **C08J 9/04** (2013.01 - KR); **C08J 9/06** (2013.01 - KR); **C08J 9/103** (2013.01 - EP); **C08J 9/12** (2013.01 - KR); **C08J 9/32** (2013.01 - EP KR US); **C08L 95/00** (2013.01 - EP); **C08L 97/02** (2013.01 - KR); **C08L 101/00** (2013.01 - KR); **B32B 2307/102** (2013.01 - US); **B32B 2307/304** (2013.01 - US); **B32B 2307/72** (2013.01 - US); **B32B 2509/00** (2013.01 - US); **B32B 2605/00** (2013.01 - US); **B62D 25/06** (2013.01 - US); **C08J 9/0061** (2013.01 - EP); **C08J 9/0066** (2013.01 - EP); **C08J 2203/04** (2013.01 - EP US); **C08J 2203/184** (2013.01 - KR US); **C08J 2203/22** (2013.01 - EP US); **C08J 2323/08** (2013.01 - US); **C08J 2395/00** (2013.01 - KR); **C08J 2397/02** (2013.01 - KR); **C08J 2423/08** (2013.01 - US); **C08J 2497/02** (2013.01 - EP KR US); **C08L 2207/324** (2013.01 - EP)

C-Set (source: EP)  
**C08L 95/00 + C08L 101/12 + C08L 91/06**

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4001352 A1 20220525**; CN 116529296 A 20230801; EP 4244282 A1 20230920; JP 2023548766 A 20231121; KR 20230100743 A 20230705; MX 2023003503 A 20230414; US 2024018327 A1 20240118; WO 2022101118 A1 20220519

DOCDB simple family (application)  
**EP 20207045 A 20201111**; CN 202180071361 A 20211108; EP 2021080885 W 20211108; EP 21801951 A 20211108; JP 2023522431 A 20211108; KR 20237019241 A 20211108; MX 2023003503 A 20211108; US 202118026369 A 20211108